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EXAMINER

LOFFREDO, JUSTIN E

ART UNIT

PAPER NUMBER

4157

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,916	<b>Applicant(s)</b> FURLOTTI, FILIPPO	
	<b>Examiner</b> JUSTIN LOFFREDO	<b>Art Unit</b> 4157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 20-26 is/are rejected.
- 7) ☒ Claim(s) 6, 18, 19, 21 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/22/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

1. **Claims 6, 18, 21 & 23** are objected to because of the following informalities:

**Claim 6** recites the limitation "the platform" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

**Claim 18** recites the limitation "the support guide" in lines 4-5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

**Claim 21** recites "the cooling component" in lines 7 & 8 of the claim. Since both a displaceable cooling component and a fixed cooling component are discussed in the claim, "the cooling component" should be corrected to specifically point out which cooling component is being referred to. For the purposes of examination, it is assumed that the applicant intends for "the cooling component" in this instance to mean "the displaceable cooling component".

**Claim 23** recites "...wherein the cooling the sealed portion..." which appears to be a typographical error.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claims 1, 2, 10, 20 and 26** are rejected under 35 U.S.C. 102(e) as being anticipated by Felder et al. (US Patent No. 6,941,762 B2).

**Consider claim 1.** Felder et al. teach an automated storage and retrieval apparatus for cooling samples in containers. There is an interchange mechanism **40** that is a transferring arrangement to transfer containers to and from the carousel **20**. There are a plurality of cooling arrangements comprising; an interchange mechanism **40** that requires a picking mechanism **41**, which is a gripping mechanism, such as side gripping fingers, vertical pincers or conveyors for gripping the containers; and a climate control system **66**, which is taught as a cooling mechanism for cooling the sealed containers. The cooling arrangements are arranged so that the containers, and hence the sealed portions of the containers, are cooled while the containers are being transferred within the airlock climate control chamber. (C 2, L 48-50; C 7, L 16-21 & 27-34)

**Consider claim 2.** Felder et al. teach a lower horizontal plate **30** that is a platform to revolve about shaft **32** and to receive one or more containers on racks **23**. (C 9, L 1-5; Fig. 8)

**Consider claim 10.** Felder et al. teach the invention as disclosed above, including the gripping mechanism **41** being pincers. (C 7, L 27-34)

**Consider claim 20.** Felder et al. teach the invention as disclosed above, including the container being transferred within the airlock climate control chamber, which indicates that they are being cooled simultaneously. (C 2, L 48-50)

**Consider claim 26.** Felder et al. teach a horizontal plate **30** that is a platform to revolve about shaft **32**, a picking mechanism **41**, which may be side gripping fingers, and a climate control system **66**, which is a cooling mechanism, where the flow of refrigerant around and contacting the containers comprises cooling components.

2. **Claims 22 and 25** are rejected under 35 U.S.C. 102(e) as being anticipated by Laing et al. (US Pub. No. 2006/0048486 A1).

**Consider claim 22.** Laing et al. teach sealing flexible containers, which forms a sealed portion, and moving the containers through cooling station **94**, thereby transferring the flexible container simultaneously while cooling the sealed portion (§ [0302]).

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**Consider claim 25.** Laing et al. teach a system for filling and sealing flexible pouches and containers. The containers are filled, heat sealed and transferred through cooling station **94**. (¶ [0302]; Figs. 15 & 15(a))

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 3-5 & 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Felder et al. (US Patent No. 6,941,762 B2) in view of Kiczek et al. (US Patent No. 5,343,714).

**Consider claims 3-5 & 8.** Felder et al. disclose the recited invention including; side gripping fingers, which are cooling components, for moving the

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sealed containers by securing the containers between the fingers; and a climate control system **66**, which is a supply mechanism for providing a cooling fluid to the cooling components, indicating that the cooling fluid thermally interacts with the cooling components. Since cooling fluid is provided to the cooling components, the apparatus must also include a discharge mechanism for discharging cooling fluid. (C 6, L 28-30; C 7, L 30-34)

Felder et al. fail to disclose a removal mechanism for removing the cooling fluid from at least one cooling component.

Kiczek et al. teach a freezer in which refrigerant exits chamber **12** via conduit **70**, which is a removal mechanism. (C 2, L 59-60; Fig. 1)

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Felder et al. with the refrigerant removal means of Kiczek et al. so that warmed refrigerant does not linger around the cooling components, which would hinder the cooling of the containers. This modification would result in the supply mechanism and the removal mechanism being connected, thermally, to the cooling components so that appropriate cooling would result, and thereafter the refrigerant would be removed via the removal mechanism.

4. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Felder et al. (US Patent No. 6,941,762 B2).

Felder et al. disclose the picking mechanism **41**, which is a gripping mechanism, being a number of devices including a pincer, but fail to clearly disclose the pincer to be radially movable.

It would have been obvious to one of ordinary skill in the art at the time of the invention to conclude that the gripping mechanism as disclosed by Felder et al. be radially movable in order to properly place the sample containers onto the circular storage carousel from the position of the interchange mechanism in the control system. (Figs. 1 & 2A)

5. **Claims 12-17 & 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Felder et al. (US Patent No. 6,941,762 B2) in view of Urea et al. (US Patent No. 6,386,816).

**Consider claims 12-17 & 21.** Felder et al. disclose the possibility of the picking mechanism **41**, which is a gripping mechanism, for moving the containers being pincers; however Felder et al. fail to disclose all of the limitations of the gripping mechanism. (C 7, L 34)

Urea et al. teach; a link **2** having a structure that is a sliding seat to receive the grips, **25** and **26**, which make up the pincer arrangement; a roller **23** connected to the pincer arrangement; and a chain **1** that is a support platform to support the sliding seat, the support platform comprising a travel path **L** that is a groove to receive the roller **23**, which is free to rotate and is therefore free to slide over the surfaces of depressions **41b**. (C 9, L 61-63; C 10, L 31 & 42-43; Fig. 5)



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Urea et al. also teach the groove comprising a loop shape (Fig. 5) with a sprocket wheel **41** defining a first portion having a first radius and a cam member **5** defining a second portion having a second radius larger than the first radius. The pincer arrangement is in the extended position when the roller is within the second portion of the groove and a retracted position when the roller is within the first portion of the groove. (C 11, L 51-58; Figs. 5 & 6) Additionally, Urea et al. teach the pincer arrangement grasping an object in the retracted position and releasing an object in one of the extended positions. (Figs. 5,6 & 9) The pincer arrangement taught by Urea et al. includes a first grip member **25** that is a fixed component and a second grip member **26** that is a displaceable component which is displaceable between an open, extended, position or a closed, retracted, position as discussed. (Fig. 1) Urea et al. also teach arms **27**, which are actuators to move the displaceable component **26** away from the fixed component **25**. (C 10, L 66-67; Fig. 1) Additionally, Urea et al. teach; a support shaft **25f**, which is an arm connected to the fixed component **25**; the actuator **27** comprising a plurality of arms **27**, which are rod-like elements, connected to each other and pivotally connected to the displaceable component **26** via support shaft **25f** (Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the gripping mechanism disclosed by Felder et al. with the mechanism taught by Urea et al. for firmly gripping and releasing printed material along a predetermined, reliable path. With regard to the intended use of the gripper, while features of an apparatus may be recited either structurally or

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functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

6. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over Laing et al. (US Pub. No. 2006/0048486 A1) in view of Felder et al. (US Patent No. 6,941,762 B2).

Laing et al. fail to disclose the cooling of the sealed portion of the containers including providing a cooling fluid and providing indirect heat exchange between the cooling fluid and the sealed portion.

Felder et al. teach a climate control system **66** that provides a cooling fluid such as a dry gas or air purge, which therefore provides indirect heat exchange between the cooling fluid and the containers within the system. (C 6, L 28-30; Figs. 1 & 2A)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system disclosed by Laing et al. with that as taught by Felder et al. as a means to cool the sealed portions of containers as desired when they pass through the cooling station.

7. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Laing et al. (US Pub. No. 2006/0048486 A1) in view of Provest et al. (US Patent No. 4,920,763).

Laing et al. fail to disclose the cooling fluid comprising water having a temperature within a range of about 12°C to 20 °C.

Provest et al. teach a chilling apparatus where a vessel 1 contains a coolant liquid for cooling that is typically water or a water based solution for cooling a container. (C. 1, L 62-66)

The range of temperature of the water is recognized as a result effective variable since it is a variable that achieves a recognized result. The result being that the range of temperature of the water is associated with effectively cooling the sealed portion of the container after the container has been heat sealed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system disclosed by Laing et al. to utilize water as the cooling fluid since water is commonly known in the art to be a useful coolant and, when kept at a sufficiently low temperature, water would effectively cool such sealed containers.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide cooling water within the range claimed in the present invention since it has been held that were the general conditions disclosed in the prior art, discovering the optimum workable ranges involves only routine skill in the art. Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. *In re Aller* 105 USPQ

8. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Felder et al. (US Patent No. 6,941,762 B2) in view of Kiczek et al. (US Patent No. 5,343,714) as applied to claim 3 above, and further in view of Shimizu et al. (US Patent No. 4,936,756).

Felder et al. as modified above disclose the invention as recited above; including a lower horizontal plate **30** that is a platform to revolve about shaft **32**.

Felder et al. as modified above fail to disclose the supply mechanism and removal mechanism at least partially within the shaft.

Shimizu et al. teach refrigerant flow through a drive shaft wherein refrigerant flows out of the axial bore **81**, which in this case is the supply mechanism to supply refrigerant into the first cavity **61** through radial bores **82**. The remainder of the refrigerant flows away from the first cavity **61** through narrow passage **83**, which is the removal mechanism. (C 4, L 5-13; Fig. 2)

It would have been obvious to one of ordinary skill in the art to modify the system as modified by Felder et al. with the refrigerant flow supply and removal mechanisms as taught by Shimizu et al. in order to provide an even distribution of refrigerant over the sealed containers. If the refrigerant was forced radially outward from the center of the storage carousel (see Felder et al., Figs. 2A & 8), it would flow more evenly immediately over the containers rather than cooling some containers more than others if distribution were uneven.

9. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Felder et al. (US Patent No. 6,941,762 B2) in view of Kiczek et al. (US Patent No. 5,343,714) as applied to claim 3 above, and further in view of Huvey (US Patent No. 4,811,761).

Felder et al. as modified above disclose the invention as recited above; however fail to disclose the supply and removal mechanism comprising a flexible tube.

Huvey teaches a flexible tube for carrying refrigerant fluids. (C 3, L 65)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the supply and removal mechanisms as disclosed by Felder et al. as modified above with the flexible tube as taught by Huvey in the case that specific configuration characteristics were desired for the supply or removal of refrigerant to the system. Since the tubes would be flexible, the refrigerant could be directed in a wider variety of directions as desired.

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10. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Felder et al. (US Patent No. 6,941,762 B2) in view of Kiczek et al. (US Patent No. 5,343,714) as applied to claim 3 above, and further in view of Provest et al. (US Patent No. 4,920,763).

Felder et al. as modified above fail to disclose the cooling fluid comprising water having a temperature within a range of about 12°C to 20 °C.

Provest et al. teach a chilling apparatus where a vessel **1** contains a coolant liquid for cooling that is typically water or a water based solution for cooling a container. (C. 1, L 62-66)

The range of temperature of the water is recognized as a result effective variable since it is a variable that achieves a recognized result. The result being that the range of temperature of the water is associated with effectively cooling the sealed portion of the container after the container has been heat sealed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system disclosed by Felder et al. as modified above to utilize water as the cooling fluid since water is commonly known in the art to be a useful coolant and, when kept at a sufficiently low temperature, water would effectively cool such sealed containers.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide cooling water within the range claimed in the present invention since it has been held that were the general conditions disclosed in the prior art, discovering the optimum workable ranges involves only routine skill in the art. Generally, differences in concentration or temperature will not support the

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patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. *In re Aller* 105 USPQ

***Allowable Subject Matter***

11. **Claims 18 and 19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN LOFFREDO whose telephone number is (571) 270-7114. The examiner can normally be reached on M - F 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on (571) 272-5026. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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